From Out of "The Ashes" Rises

ZXir QLive Alive!

The Timex/Sinclair NorthAmerican User Groups Newsletter

Volume 4 Number 2 **Summer 94**

Chairman Donald S. Lambert Auburn, Indiana

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Volume 4 Number 2 Summer 1994

T/SNUG Information

T/SNUG

Here is the list of T/SNUG Chairmen and how to contact them. We wish to support the following SIGs. ZX-80/81. TS 1000. SPECTRUM. TS-2068. TC-2068. Z88 and QL. If you have any questions about any of these fine machines. contact the

Chairman

Chief Motivator
Donald S. Lambert (ISTUG)

Vice-Chairmen

Tape & JLO PD Library
D G Smith
R 415 Stone St.
Johnstown, PA 15906
814 535-6998

Z-88
Dave Bennett (HATSUG)
329 Walton St. Rear
Lemoyne PA 17045
— 717 774-7531

ZX-81 PD Tape Library
Ed Snow
2136 Churchill Downs Cir
Orlando, FL 32825
407 380-5124

RMG Enterprises
Rod Gowen (CCATS)
14784 S Quail Grove Cir
Oregon City, OR 97045
503 655 7484 FAX 503 655-4116

TS-2068
Rod Humphreys (VSUG)
10984 Collins Pl
Delta, BC V4C 7E6 Canada
604 583-2819

QL PD Library
John Donaldson (CATUG)
835 Foxwood Cir
Geneva, IL 60134-1631
708 232-6147

BBS — GATOR
Bob Swoger (CATUG)
613 Parkside Cir
Streamwood, IL 60107-1647
708 837-7957 Work 708 576-8068

Treasurer

Editor & LarKen PD Library
Abed Kahale (CATUG)
335 W Newport Rd
Hoffman Estates IL 60195 3106

ZXir QLive Alive!

Is the newsletter of T/SNUG the Timex/Sinclair NorthAmerican User Groups, providing news and software support to the T/S community in a **volume** of four newsletters per year, beginning with the Spring (April) issue.

T/SNUG's main goal is to keep our Magazine, our vendors and our repair service alive for the benefit of T/S users. These valuable services shall have free advertising space in this user supported Newsletter that they can see that we are still active out here. We must support their services whenever possible

Another T/SNUG goal is to unearth titles of all known Public Domain and commercial software available for all Timex/Sinclair machines, building a library and providing lists of that software showing both the source and the availability

We encourage your group to copy this newsletter and distribute it at your regular meetings to all your members. If you cannot copy this newsletter a disk can be provided with the articles for use in your newsletter

If you feel T/SNUG should perform other tasks let us know your feelings If you have solved a problem in one of your software or hardware, please share it with the rest of us

You can keep T/SNUG alive by an annual contribution of $12 for one **volume** made payable to Abed Kahale. Send check to

ABED KAHALE
335 W NEWPORT RD
HOFFMAN ESTATES IL 60195-3106

Phone.- 708 885-4337

Back Newsletter copies are available for 50¢ each postpaid

Article Contributions

Send in your articles by tape or disk and your inputs to:-

DON LAMBERT
ZXir QLive ALive! Newsletter
1301 KIBLINGER PL
AUBURN IN 46706-3010

Phone 219 925-1372

Or by hardcopy, mail to:- Abed Kahale. (Address on this page)

GATOR's TWISTED PAIR

!! SINCLAIR !!

We have a 24 hour BBS and encourage you to exchange mail and contribute to the Upload Section. Use it and have fun!! — (8N1 300-2400 BAUD)

Call 708 632-5558

and Register using your first name, last name and phone number along with a password you won't forget, and **Write It Down!** Do not try to do anything else this first time because all the board options will be locked out

When you call-in the next time you will have Level 5 security and be able to enjoy full user privileges The BBS has smaller sections called conferences Select 'J' for Join a Conference to see the different user groups Select "TIMEX" to get into the Sinclair Section The mail you then read will only be from other TIMEX Sinclair users but all SIGs share the same bulletins Use extension .ART for articles, .ADS for ads and .NWS for news when uploading

Download articles appearing in this newsletter having .ZQA extension.

For help contact the SYSOP by leaving a message mail E-mail or phone Bob Swoger SYSOP ~~.=GATOR==--
(Address & Phone to the left of page)

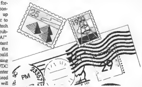
Input/Output

by Abed Kahale

If you have a question, a problem or a solution why not send it to us We will try to find an answer and we will all share it. Mail to

A Kahale or D Lambert
(Addresses are on page 2)

Richard A. Jelen of Grafton OH "Thank you for the copy of T/SNUG in which Don Lambert published some of my letters, it is a fine newsletter. Also, I would like to take this opportunity to thank you for the SORT routine which I adapted to my own "Parts" program (which is a program I developed years ago to list my movie listings and later adapted to Parts.)
I got your SORT routine from a program you did for UPDATE! I almost forgot to mention this concerning the marked up schematic I had sent to Don Lambert and which was subsequently published in April 94 ZQA!"
"Regarding the constant current charger for the 2068 Ni-Cads, it should be noted that I am using the TS-2068 15 VDC power adapter, the center pin is negative. If used as drawn, no charge will occur, since the drawing was originally made for the TS-1000 9 VDC adapter the center of which is positive Just thought you might like to inform your readers, though no damage will result, it might save lots of head scratching "



ERRATA

Ni-Cad Charger — ZQA!, Spring 94

The TS-2068 Power Adapter Center Pin is negative and should go to ground.

Thanks Rich, Welcome aboard, and thank you for the program. Abed

Edward Snow of Orlando FL " Even though my TS computers don't get much use anymore, I still enjoy following the latest in the TS world."
"Please note that my current involvement with the QL computer is limited to two non-working units Please change my listing from the QL & ZX-81 Tape as I have nothing for the QL I am getting QL related calls and I am unable to help the callers "

"I am glad that T/SNUG finally got a BBS going, but unfortunately the long-distance charges will limit my involvement some I do intend on getting on-board this coming weekend."
Congratulation on the great job with the Newsletter You and Don are doing a good job keeping articles in the Newsletter I am planning on contributing some programming articles later (probably May) since I am changing jobs to a 40 hour-week position in April and will finally (after 4 years) will be home in the evenings and on weekends
Congrats on the excellent job you are doing!"

Thanks for the vote of confidence Ed. I am sorry for the error I was led to believe that you had QL articles I hope your new job will prove to be to your expectations and provides some time for us guys!

Abed

Robert Gilbert of Waltham MA "I would like to sign up for your ZXir QLive Alive! Newsletter and join in the fun. You come highly recommended by Rod Gowen of RMG Enterprises and he tells me your group is among the best of TS groups."
"Haven't I seen your name somewhere? Did you write something in a newsletter or a magazine? Are you a shareware author?"

Welcome to our community Bob we hope we will measure up to your expectations
I have written a few articles for UPDATE! Magazine and a couple for Sine-Link newsletter and I do have the LarKen Public Domain Library Our thanks GOTO Rod Gowen. Abed

Gene Ray of Milner GA. "First I want to thank you for your help with my software problem I appreciate the schematic from Bob K9WVY, and I think I can build it with no problems
The two sheets attached to the Spring Newsletter, list of used equipment and software, but I am not clear on who has it for sale The page listing a Morse Code Translator for $20 and I think this is what I am looking for The listing at the top of this page is for TS-2068, will this work on a TS-1000? Again, Thanks for everything 73's "

Welcome Gene. Sorry about the two XTRA sheets, they were handed me just before mailing so I tucked them in without editing. The gentleman's address is:

KEITH WORRELL
22 2ND AVE N
ST MATHIEU QUEBEC J0L 2H0
CANADA

The Morse Code Translator program for the TS-2068 can be converted to ZX-81 language if it is in BASIC. May be you can send for it on the condition that it is in BASIC!

Abed

Robert Barnett of Ft. Myers FL: "Please put me on the list for your fine publication. I am forever grateful to those of you who take the time and effort to do such tasks as this. I do hope you get somewhere near the pleasure in publishing them that we do in reading them."

Welcome to our community Bob. Words like yours is what keep us going. We sure enjoy our work especially when we receive such appreciation and encouragement such as yours. *Abed*

Robert Hartung of Huntertown IN: "Thank you and all the others for the work you are putting in it."

Rod Gowen of Oregon City OR: "Thank you for the letter regarding the change in T/SNUG policy. I appreciate the concern. It is a real concern to me when I have to compete with more sources. The less competition I have, the longer I will be able to stay alive. Sales are at an all-time low for RMG."

"I will continue to offer as much PD software as I can. I do not do it so much for the profit (if any!) but because I enjoy being able to distribute it. I also have a lot of **share-ware (over 1200 Megabytes on CD)** available for PCs and send out quite a bit.

Policy Declaration!

From the conception of the Timex/Sinclair user groups it was the thought of all the chairmen of that time that the ZXir QLive Alive! newsletter would be in volumes of at least 4 issues per year beginning in April with the Spring issue. Anyone signing up for that year would be entitled to one complete volume for contributions received from the April of that year to March of the following year. In that way ZQA! would know when to shut down its services without anyone losing money.

This plan was not conveyed to our present newsletter editor and treasurer, Abed Kahale. The error was discovered when Abed informed us as to the difficulty contributors had in understanding when to send in funds. As our funds dwindle ever downward, we wish to get back on track first by stating our original intention, asking our supporters to inform us if we owe them any back issues, and then sending in their contribution for future volumes before March or as soon after as possible. We always publish our treasury report so that you might know how ZQA! is doing financially.

We T/SNUG chairmen will do all we can to keep the Sinclair community alive for all Timex /Sinclair Users, Groups and Vendors. To this end, if a vendor offers a product or service, T/SNUG will not compete in that area. For this reason, although T/SNUG collects and builds collections of books, magazines, newsletters, and software libraries, we shall direct you to a vendor to supply it to you rather than compete with the vendor and drive him out of business. Only if all other available sources dry up will T/SNUG supply those items.

Bob Swoger

I too, am endeavoring to insure that ALL vendors and current users stay around as long as possible. I am constantly referring customers to Mechanical Affinity for QL products as well as to T/SNUG and UPDATE! for magazine/users group information. As you know, I have been and will continue to be, a full-time SUPPORTER of the TS community even if I have to quit my full time computer business."

David Lassov of Tucson AZ: "This 2068 machine is dead, only when we say it is dead, by abandoning it. As a matter of fact, Dan Elliott and Rod Gowen have collaborated to fabricate for us a marvelous disk pack that houses our four drives with a built-in fan. We guess that nobody up north has any appreciation of the summer months here in Arizona, where a hot day is something near 120 degrees F." "...Daisy disk is being sent to Bob Swoger, the word-processing software of our system will be declared up-to-snuff, reliable and open."

"Sorry to bring this up again... ten years ago, the cycle rate of our TS-1000 slowed down when running of our motor home AC circuit powered by an almost dead battery... we were going from 12 VDC to 120 VAC from a declining source voltage."

The TS-1000 or any electronic device will only run properly if supplied by the voltage indicated on the device normally 90 - 130 VAC in the US. Your 'declining voltage' must have declined below 90 VAC.

Abed

TreaSury NoteS

Supporting T/SNUG

		Credited for Volume of
Alvin	Albrecht	94/95
Paul	Anderson	94
Robert ☺	Barnett	94
Dave	Bennett HATSUG	94
Les	Cottrell	94
Jaime	Cruz-Figueroa	94
Robert	Curmutt CATS	94
William	Des Lauriers	94
Kenton ☺	Garrett	94
Robert ☺	Gilbert	94
Rod	Gowen CCATS/RMG	94
Ferdinand	Gunther	94
Robert	Hartung	94
Fredrick	Hill	94
William	Homer	94
Glenn	Hufstedler	94
Warren	Jackson	94/95
Richard ☺	Jelen	94
Phillip ☺	Joe	94
Jon	Kaczor GCTSUG	94
Joan	Kealy	94
Quentin ☺	Kent	94
Wayne	Knaust	94
Donald	Lambert T/SNUG/ZQA!	94
David	Lassov	94
David	Leech Byte-Back	94
Harry	Miller Jr	94
Frank	Mills CATUG	94
Gregory	Newkirk	94
Richard ☺	Norek SUGWNY	94
Gilliam	Parrish	94
Jack	Payne	94
Gene ☺	Ray	94
Hugh	Scriven	94/95
Robert	Shade	94/95
John	Shepard	94
Greg ☺	Simmons	94
Francine	Sklar	94
Edward	Snow	94
Dane	Stegman	94
Ivan	Zachev	94

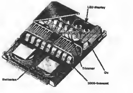
The above list of members have been credited for the volume(s) per our new policy. See page 4 for details.

		Expires
Daniel	Chattin	8/94
Fred	Henn	7/94
Jeffrey	Kuhlmann	7/94
Lafe	McCorkle	9/94
Mike	Stephens	7/94
Alexander	Sweitzer	7/94

☺ *Welcome to our New Members*

As of July 21, 1994 we have a balance of $382.23

Abed Kahale Treasurer



sinclair

SINCLAIR RADIONICS
375 Park Avenue
New York, N.Y. 10022
Tel. 212-688-6623

(1976)

FROM THE CHAIRMAN'S DISK

Donald Lambert

Where? Where does the time go to? Seems that I just sent in the last issues material and here it is again time for another issue to be submitted. So here goes!

For the Z88 users There is help to cheapen the expense of batteries Use RAY-O-VAC RENEWAL batteries I understand that the Z88 uses four AA batteries and they are at Wal-Mart in Auburn for the price of four for $4 25 and you will need two sets so that one can charge while you use the other set And the Charger is $10 00 So for $18 50 plus state tax of $0 93 that comes to $19 43 and two sets of batteries means 50 cycles at 25 cycles per set which yields a cost of $0 39 per cycle of use. And since the charger is already paid for then on the second set of batteries the cost will be $8 93 divided by 50 or $0 18 per cycle of use. I don't know who is buying them but they sell out of the batteries and charges fast

And see the article by Les Cottrell on scratch building a LarKen dock board, and the LarKen I/F too it can be done but not for the faint hearted. If anyone is interested, Paul Holmgren has the WD1770 chip for $9 00 postpaid address elsewhere in ZQA!

There is a magazine or newsletter devoted to the early computers and one issue had an article on the ZX81 I got a couple of sample issues and it put me more in mind of the early issues of BYTE magazine It is The Computer Journal and runs to 52 pages plus cover and is published 6 times a year Sort of pricey at $24 00 a year but if you are into old computers it is worth a look. The address is

THE COMPUTER JOURNAL
P O BOX 535
LINCOLN CA 95648-0535
TEL. (800) 424-8825 or (916) 645 1670

From the Editor

We are grateful for the appreciation and encouragement we have received especially concerning the last issue. Some asked on how we do it? By we, I mean Bob Swoger, who with Don Lambert and Al Feng (who owned ZXir QLive) established ZXir QLive Alive! Bob is the TS-2068 prodigy man. Don is where most of the articles and members' help come from and myself, the Editor and Treasurer. Not in the least, the backing of the Chicago area group and the president of CATUG, Nazir Pashtoon, who has many hardware developments to his name way back before Zebra Systems used his talents.

Bob — GATOR Software Development — is deep in the work force with three other newsletters to his name, an extensive TS-2068 software library *and access to a copier*. Don and myself are retirees with time on our hands. We seem to be of the same opinion - *Right or wrong, Get the Newsletter out*. I try to follow my own rule which was on the wall in my office at my past place of employment where I was derailed after 30 years:

Get The Job Done with a little more effort
Do It Right or get off the pot

May not be a perfect job, as perfection is not for us mortals Which reminds me! I was interviewing a just retired 47 years old Engineering Corps Captain for an open position. He let me know that he was not really in need of a job but he wanted something to keep him active I drew his attention to my RULE, he read it then said, "No Sh !", stood up and walked out.

Not unlike all Sinclair publications, we are always in need and looking for new material to publish. **So**, you don't like to write articles?! Why not jot down your ideas on paper and mail it to us as is, may be we can make an article out of it.

We all enjoy working with Sinclair products that do make a lot of sense to us So as long as you and we are still around supporting each other, we will have a Sinclair appreciation Newsletter

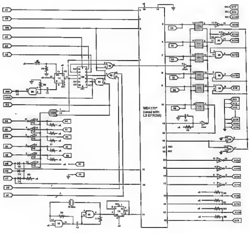
Ahed

Anybody out there working with the AERCO FD 68 disk interface for the T/S 2068? There are some still working with it and still doing programming and improving the original system. There is a non EPROM SPECTRUM for the AERCO that is on disk and apparently the software POKEs SPECTRUM into the AERCO memory and it works from there. There were two programs on disk and they worked in the SPECTRUM mode Of course, the AERCO has RP/M capabilities and that is a mystery to me till I get a copy of a CP/M manual I also have a possible source of PD software for the AERCO I am working on that

I started a project that will make articles for ZQA (if I don't get submissions) available for future publication. I have my newsletters filed according to name alphabetically and I started with the first one and I have gotten through THE PLOTTER (filed under PLOTTER) working with issue one through December 1984. Some newsletters are not represented and a few have all issues in that group I have typed in all the articles that I have found that were usable and I could read Some reproduction made articles unreadable. There were some great articles in that time period Some day I will continue the project and I will when I finish the newsletters take a look at the magazines and when finished with the first issue to December 1984 will go through again with January 1985 through some new cutoff date It is quite a project

I got through the agony of the living room decorating All the furniture was moved to the center of the room for several days about a couple of weeks probably but Masako my wife felt like it was an eternity And we finally got It done and it was worth it

LARKEN 2000 DISK INTERFACE



filter capacitors

between 06 & 74

between 32 & 1770

between 1770 & 7406, 7438

between 174 & disk connector

component	marking	value
R1,R2,R3,R4	R BK-BN	200Ω
R5,R6	BN-GY-R	1800Ω
R7,R8	BN-BK-R	1000Ω
R9,R10	Y V-BN	470Ω
R*		391 x 5 SIP
C1	102	.001µF
C2	471	.00047µF (470pF)
C3,C4 C5 C6	104	1µF
C7	22µF, 10v	
diodes	1N4148	

chips

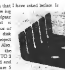
WD1770*	74LS00	7406
74HCTLS32	7438	74LS74
74LS138	74HCTLS174	74LS366

18 Mhz crystal

* or WD1772
(used with L3 EPROM)

That took up most at the month of May first getting it done and then recuperating afterwards Whether I want to or not I find that there is other things to do besides playing with my T/S toys

I have a good question that I have asked before Is there a way to calculate how big of a heat-sink to use to dissipate one watt of power that is dropped by a 78XX regulator or its equivalent? I have a disk drive power supply project halted with that question. Also does anyone know if the regulators in the TO 3 configuration have overload and thermal shutdown? These are 5 amp 5V and 12V regulators I am mounting them in a IBM PC type power supply case and the only things left in the case are the bare circuit board power switch and fan. Not having more details I guess I will barge ahead after all this delay and plunge ahead and see what I can do with the project. I guess I can test the thermal shutdown by covering the regulator and seeing if it will shut down if too hot Same for short shut down Might try the regulator but it is not that expensive I have some heatsinks with fins so will try them.



Use any heat-sink that you have on hand. Any heat sink is better than none The flange have to make good and tight flat to flat contact with the heat-sink with paste in between (Wakefield heat sink compound) You didn t say how much current you are going to draw from this regulator nor what its part number is As a rule of the thump the larger the heat-sink the better If the regulator is a TO-3 then use a TO-3 heat sink, a TO-220 use a TO-220 heat-sink and so on They are available from electronic stores I will mail you information on how to design your own — it gets pretty involved

Yes all regulators have thermal and overload shutdown (shorts too). To test for that you have to draw heavy current from it until it shuts down Abed

Instead of filling (wasting) space with my comments I will fill it with other stuff With that I will leave this

LarKen Disk Interface Circuit

by Les Cottrell

"Dear Don

You will also receive a package with a home made LKDOS Dock PC Board for the TS-2068 from me. This letter is being written the day after I sealed up the package. The letter in the package complains about not being able to get my home made I/F PC Board to work. Well, the problems I had with the Dock PC Board made me re-think the I/F troubles. I replaced all the cheap diodes and then replaced two chips that were not exactly the same as on the real LarKen PC Board. Now it works and I can finally send the schematic I started a year ago to Sinc-Link. Below is a copy of the article. This alone was worth the time spent in making the Dock PC Board for you. We both win! Thanks."

Did You Know ?

I have been trying for quite a while to verify the schematic that is printed here. I was finally able to verify that my analysis is accurate It is very difficult to follow all the traces on the chip side of the LarKen PC Board I broke a socket when trying to peek under the WD1770 chip After I found out what I had done I became more careful what would I do if I couldn't use my drives?

Not shown on the schematic are the +5 connection for the small chips which is on the highest pin number, either 14 or 16 The ground connection is on the opposite corner, 7 or 8

Please note that data lines D0 thru D5 have two locations so that the schematic would look a little cleaner The second one is just to the right of the WD1770 outline Otherwise the Timex edge connections are on the left and the I/F PC Board connections labeled EC1 thru EC34 are on the far right

Don Lambert probably doesn't realize what a big help he was by writing to me In my attempt to prepare my reply to him I learned that the chips used on both the interface PC Board and the Dock PC Board can't be freely substituted without possible problems For example I tried to replace the 74LS00 on the I/F with a 74HCTLS00 but it didn't work! Fancier is not always better Larry Kenny sure knew what he was doing and he did good Some chips probably can be substituted but I am not enough of a hardware hacker to know when (or why)

I had also seen in the Chicago Area Timex Sinclair Users Group newsletter that you should always use the 1N4148 diodes that come 10 to the package from Radio Shack (P/N 276 1122) and not the bargain package

Perhaps the best lesson here is that we as TS users need to communicate with each other **Writing An Article For Our Newsletter** is a great way to do this Dons letter solved a year's worth of frustration for me and he didn't even know that I had a problem! **In order to continue to improve ourselves we must learn from each other** All the big companies are learning that they need to do this. So should we!

LES COTTRELL
108 RIVER HEIGHTS DR
COCOA FL 32922-6630

Comments by Don: On the Dock PC Board that Les sent me all chips are socketed and as he mentioned in the letter with the PC Board it keeps the Dock lid from closing all the way It is held on about a 1/16th of an inch. And when I inserted it into the Dock port I found that it worked as well as the original LarKen Dock PC Board. At a quick glance the main difference of the top of the PC Board is that the LarKen is green in color while Les's PC Board is brown Turned over and there are etched leads on the LarKen while Les's has red wire wrap wire. The placement of parts is very identical.

The main thought that occurred to me is that anyone with the following interfaces: AERCO, Oliger, RAMEX would build a Dock PC Board and secure a copy of the appropriate EPROM and a Format disk would be in business using the LarKen disk interface.

In his first letter this is what Les referred to

As you may have suspected from my article in Sink-Link some time ago I had to construct a Dock PC Board in order to verify the schematic that I published. I will use a copy to print this letter on. The enclosed PC Board for you was made from a Radio Shack board and I notice that it holds the Dock door open a little bit The first one I built was made from a Spectrum cartridge PC Board from Zebra and does not hold the door up I thought I had an OS-64 PC Board somewhere but I was unable to find it

I did notice an omission from the schematic, pin 1 of the 74 chip goes to ground Several components are in little sockets called "Springs" The transistor, the big diode the LED and the 470 pF capacitor I didn't have the small cap on hand when I started wiring and I really don't know what the large diode really is I was lucky on the first one, but using the same one on this PC Board didn't work. So I tried one marked differently and it did work. Fortunately I had also socketed the big diode on the first one and when I substituted them I was able to locate the faulty part I enjoy making circuits so this gets chalked up to hobby time.

I assume you have the version L3 and not L3f EPROM. If you are going to use it in a non-LarKen application it shouldn't matter anyway

I have not had the same luck with the disk I/F PC Board I have made two and neither one works I am an aeronautical not an electrical engineer so I haven't been able to figure out why the I/F won't work. I think something is critical around the area of the crystal, but I haven't figured it out yet. I feel sure I have the schematic figured out but I won't publish it until I can verify it with a working copy Do you know of any hardware hackers that I might confer with?

Yes, Nazir Pashtoon is a sure bet. Chad

Sometime back there were QLs selling for $35 as is condition that I missed I have a collection of Sinclairs and Sinclair stuff in my computer room, I would like to have a sample of a QL even if it didn't function. Of course I would love to find one that did work. *(Check RMG ads and Mechanical Affinity)*

(As you can see the last letter preceded the first I only included it to show how some problems get solved This time through Bob Swoger who brought up the problem in CATUG meeting, Nazir Pashtoon cautioned about the use of the chips in question.)

Schematic is on the following pages Send a LSASE to A. Kahale for a complete set which includes the Doc PC Board layouts (Address is on page 2)

QLuMSi DOS *(V4.30)*

by Al Feng

QLuMSI DOS (QLusing M'cr°S°ft interface Disk Operating Simulation) has, as the version number might suggest, recently undergone a long awaited upgrade which had been partially delayed by my year of voluntary service (servitude?)

As many of you know Version 4 of the QLuMSI program has added the following commands:

```
CD \
CD \[sub-DIRectory_prefix]
MD \[sub-DIRectory_prefix]
RD \[sub-DIRectory_prefix]
```

Most people with a QXL, GOLD CARD and FLP/RAM chip should welcome the ability to access sub-DIRectories

The MD\ command (with a "sub-DIRectory_name") will initiate the MAKE DIR command and MAKE a sub-DIRectory on the medium. For example (you may want to try this on a dupe of your master disk) at the prompt input the following

```
MD \FAST
```

When you input DIR (presuming you have appropriate TK2_code) you should see

```
FAST ->
```

in place of FAST_Disk and FAST doc

The CD \ command with a sub-DIRectory_prefix will access

a) the sub-DIRectory on the medium, or
b) any other valid prefix.

Thus if you were now to input "CD \FAST" (after performing the above example) you would see

```
A \FAST \ > _
```

Now inputting "DIR" will show you the two files along with a data file e g

```
    FAST_Disk
          2758 1993 Sep 19 17 00 00
    FAST_doc
          4096 1993 Sep 19 17 00 00
    FAST_
          64 1993 Sep 19 17 00 00
```

The CD \' command (without a sub-DIRectory_prefix) is used to return to the main DIRectory

The RD \ command (with a "sub-DIRectory_name") is used to REMOVE a sub DIRectory from a medium.

NOTE. If you have several sub-DIRectories with similar "names" then you may be asked whether or not you wish to REMOVE them also e g

```
RD \LETTER
```

will prompt you if you wish to REMOVE the sub DIRectory named LETTER as well as LETTERS (for example).

NOTE. If there are files in the sub-DIRectory, the sub-DIRectory will not be REMOVEd.

As before, those more familiar with the standard DOS commands may opt to utilize the smaller COMMAND_COM version of the program.

Both the "full" version of the QLuMSi program as well as version 4 of the COMMAND COM program require that your QL has the MAKE_DIR command available to it in addition to the traditional TK2_EXT code

To accommodate those who either do not have a QXL, GOLD CARD, or FLP/RAM chip a version of the new QLuMSi program has been included which does NOT require MAKE_DIR, hence, will not allow you to "MAKE (a sub-)DIRectory" on a medium. This is the QLuMSI_COMn program you will find on your master disk (use BOOT_ALT)

QLuMSi Printing

In the current version indicating the device as either COM or LPT still presumes SER. This may-or-may-not be an inconvenience for QXL users as my understanding is that some of the I/O drivers have not been written yet

Undocumented

Feature (v4 30)

People with a QXL, GOLDCARD and FLP/RAM chip should welcome the ability to access sub-DIRectories The problem arises when you decide you know longer wish to have the sub-DIRectory on the medium. It just doesn't seem that easy to get rid of

Maybe it was obvious to the people at MIRACLE, or maybe I didn't read the documentation well enough that I received with the FLP/RAM (and, this is true for GOLD CARD documentation, as far as I can tell), but the only way that I could figure out how to REMOVE a sub-DIRectory was with the WDELete command, and this I determined by accident! Now at first, I would WDELete through the entire directory This was, often, tedious Trying to WDELete a specific (empty) sub DIRectory proved fruitless

At some point I either had a typo or a serendipitous moment, and I realized that I might be able to input an incomplete filename_$tring and get the desired effect. The RD \ command utilizes QDOS's WDEL command, and the user defines the sub-DIRectory by direct input and can be used within QLuMSI (v4 30) for designating a specific string. For example, if you were to input. RD \doc, QLuMSi would then ask you if you wanted to WDELete all the _doc files QLuMSI will also prompt you for other "_do()" files Obviously some caution must be employed by the user!

I will make necessary changes in the future as information becomes available to me

QLUSTer Upgrade

QLUSTer has recently, some will say *finally!* undergone a long awaited upgrade which had been partially delayed by a year of voluntary service (*servitude?*) in ***Western New Mexico***, on the Eastern Navajo Reservation, as they like to say/suggest to the potential donors

As of mid-October 1993 the latest release version is 5 109

The significant change which prompted the new version number was the ability to access already made" sub-DIRectories structures

QLUSTer requires that your QL have access to five superTOOLKIT2 Keywords WCOPY WDELete SPooL, RENAME and WSTATus

Sub-DIRectories [... ->]

Access to the sub-DIRectories is performed by simply pressing the appropriate key designate as you might for an individual file. QLUSTer will determine that it is NOT a file and go about the task of retrieving and displaying the sub DIRectory

The sub-DIRectory will be "in play" even if you change the device to a floppy which does not have a sub DIRectory structure The net result may be an empty page if no files exist with the appropriate DIRectory prefix.

Return to the main DIRectory via SELECT_DEVICE option (press '0' to access) If the disk you are using has sub-DIRectories [i.e. "->"] but your QL does not have the MAKE DIR command then QLUSTer will at last attempt simply access the first file in that sub-DIRectory Subsequent files will not be accessible other than via WCOPY or WDEL etc.

Greater "Crash" Protection

Time away from Qomputing has helped me resolve the problem of my version of TURBO (2.00) implementing file type recognition. It is believed that the only reason QLUSTer will hang-up/crash now is if the EXEctable file is corrupt and does not load properly or, if you are attempting to load binary code created by (yes, you guessed it) DIGITAL whose binary code apparently "looks" like EXEctable code to the QL.

A solution to this is to place such code in its own sub-DIRectory e.g. "Turbo_TK_code" has hung up my QL when testing the F(ile)TYP(e) check, so I have placed it within its own sub-DIRectory to prevent my accidentally attempting to EXEC_W it. Okay I'm sure there must be another way to CRASH the program, but I'm trying to avoid thinking about it (or them)

QLUSTer 5.109 will now "ask" whether or not your printer is READY before it will attempt to send a file down the line QLUSTer requires TK2_EXT code

Same upgrade policy as before to anyone who has acquired a copy of QLUSTer either directly from me, through EMSOFT, or UPDATE! Just send $2.00 to cover the cost of a new disk (specify size) and the postage and handling (as they say) Send comments/ questions/ queries to -

AL FENG
914 RIO VISTA CIR SW
ALBUQUERQUE NM 87105 USA

Happy Trails, and Computing, to You...

Relocating Machine Code Programs — TS-2068

by the late James F Brezina

Why would one want to relocate machine code? Many machine code programs written for the TS2068 are located in the same area of RAM Sometimes one might want to use both if they can be used that way If you relocate one you may be able to use both. I had previously purchased the Zeal disassembler and found that I couldn't use my printer driver with it because they both used the same area of RAM to store their machine code. Although the printer interface (I use Tasman) had a driver program to store in the computer's printer buffer, I found that I couldn't use that either because something in the Zeal disassembler would wipe that out. I found out that, even after transferring the printer driver to an address below the Zeal disassembler machine code, I still could not use it directly through the Zeal disassembler I had to use the Tasman screen copy routine to get a printout of the screen. Tasman has two screen copy routines One is for text only and is stored with the regular printer driver The other is stored in the computer's printer buffer and will copy anything on the screen The computer's printer buffer location is reverted to normal with NEW Machine code programs that have been SAVEd on tape or disk are LOADed back into the computer memory with LOAD " " CODE or a name can be specified [must be for some disk systems] With that simple way of ENTERing the code is placed at the same address it was SAVEd from. If you want to relocate it then you enter LOAD " " CODE (address) and it will load in at the address specified If the code contains only relative jumps and ROM calls, it can be RUN with no changes If it contains absolute jumps and calls within its own addresses, these will have to be changed for the program to work. I have successfully done this to a few programs and got them to work

A disassembler program comes in quite handy for accomplishing the changes I use the Zeal disassembler since it prints out the addresses in decimal The Zeal disassembler has a set-up to PRINT to a printer but, as far as I can tell it only supports the TS2040 printer The Zeal disassembler did give me an option to have the program disassembled in its present location and in its original location, or at any address I choose If you want, you can get printouts at both locations In order to get a printout of the Zeal disassembly, it was necessary to break out of the Zeal program with CAPS SHIFT/BREAK and then copy the screen. This was a little tough to do on the first break out but, after that it was no trouble

If you have made the printouts at both locations take the two printouts and compare them. One of the things you will notice is that the relative jump addresses are different. This is correct and they do not have to be changed You will then notice that the absolute jumps and calls are the same in both listings You will also notice that paired registers are LOADed with numbers These numbers are equivalent to addresses in the code Generally, these are the HL register All the absolute jumps will have to be changed. If the calls and HL numbers are to ROM or (in most cases) to addresses below 26710 they do not need to be changed If the calls and HL numbers are to addresses in the program, they will have to be changed What I do in this case is look for the address shown in the original program. Then I find the comparable address in the relocated program and break it down into High Byte and Low Byte (i.e. High byte = INT(address/256) and Low Byte = address - High Byte * 256) Once you have this information you go back to the relocated address that originally listed that address in the mnemonics and

POKE the following two addresses with the Low Byte and High Byte in that order It is a lot of work but once you have everything changed you have a relocated program that works like the original. You must re-SAVE the changed program and it will load back in at the new address without specifying the new address Remember that you must set RAMTOP at one address below the start of the code. Since I now have the Tasman printer driver located at 60000 and the Zeal disassembler LOADed in, I initialize the printer driver with RANDOMIZE USR 60003, and then use RANDOMIZE USR 60000 to make a text only screen copy

I have used this procedure to move other programs. One of them was the screen copy code that Tasman had supplied. Tasman had listed a number of printers for copy codes they had on the cassette but, they didn't list any printer (Panasonic) by name I tried all of them, but the only one thet appeared to work correctly was one called Shin-Wa These screen copy codes were all stored in the computer's printer buffer There is one thing wrong with the code being located in the computer's printer buffer When you key NEW, the code is erased I LOADed in the Zeal, followed by the relocated printer driver, and then the screen copy code. I got a printed copy of the disassembly of the screen copy code I wanted to relocate to 63000 but since that was in the Zeal code area I chose 53000 to locate it at temporarily and then set the relocation to 63000 (10000 bytes) in the printout. Using the 53000 made it simpler to figure start addresses I then made a hard copy of the disassembly and went back to the menu and changed the relocation to zero and made a hard copy of the code at 53000 Comparing all three listings, I found that I had to make the changes After ENTERing the changes at 53000 to 53256 I SAVEd the code Then, turning off the computer to clear everything out I turned the computer on again, set RAMTOP at 62999, LOADed the copy code in at 63000 I then re-SAVEd the program at the proper address I now have a screen copy code that remains in memory after NEW I think I should mention here that, one of the addresses LOADed into the HL register in the screen copy program is used to contain a number that is used to control the size of the screen copy That address will contain a 1 for small screen copy and 0 for large screen copy The large screen copy will not copy the full horizontal screen. It will be a few columns short on the right side. This is an example of the reason for changing the numbers held in the HL register Although I do not understand enough to write my own machine code, I understand enough to figure out how to do things like relocating machine code You can do it too

PARTS Inventory

by Richard Jelen

Here is an updated program that I use to keep track of my inventory of parts. I developed it years ago to keep track of my movie listings. I got the sort routine from the program RecordKeeping in the October 93, UPDATE! Magazine. Set DIM(500,32) to values you prefer, and then GOTO 4000 to start records keeping. Of course you should always use GOTO 4000 any time you BREAK into the program.

```
      Make Your Selection
1  Add or Change List
2. Review List
3  Copy List
4  Sort List
5  Save to Cassette
6  Make Bin Lists (after 4 above)
7  Change Quantity/Price (after 4 above)
           Bin Lists
1   Copy All Bins
2   Copy a Bin
3   Return to Menu
        Change Quantity
1   By Item
2   By Item No
          Change Price
3.  By Item
4   By Item No
M  Return to Menu
```

```
10 POKE 23658,8: GO TO 4000
15 BORDER 5: PAPER 6
20 GO TO 700
22 CLS : BEEP .1,15: BEEP .1,20: BEEP .1,25
25 PRINT AT 10,1; "your NEXT selection is no.";a
30 PRINT AT 15,0; "enter no. at which you wish to  start."
35 BEEP .3,40
40 INPUT b
50 PRINT AT 20,0; "enter no. of selections you wish to add
or change."
55 BEEP .5,40
60 INPUT m
70 LET l= m+(b-1)
80 CLS
100 FOR a= b TO l
105 BEEP .3,40
110 PRINT AT 4,2; "ENTER YOUR SELECTION NO. ";a
120 PRINT AT 9,0;"Enter PART Number & DESC.-then-"
130 PRINT AT 12,0;"at 'Bin" enter($)+bin loc. no."
135 PRINT AT 13,4;"-"
140 PRINT AT 15,0; "at "Qty" enter QUANTITY OF PART.'
145 PRINT AT 16,4;"-"
150 PRINT AT 18,0; "at "Cst'enter'COST"(whole dolrs)"
155 PRINT AT 19,4;'-'
160 PRINT AT 21,0;"Part No./ Desc.----Bin-Qty-Cst"
165 BEEP .2,30: BEEP .3,20
170 INPUT a$ (a)
175 CLS
180 NEXT a
190 GO TO 5000
200 CLS : BEEP .2,30: PRINT AT 10,5;"SORT?(Y)(N)??'
201 IF INKEY$='Y' THEN  GO TO 204
202 IF INKEY$="N" THEN  GO TO 5000
203 GO TO 201
204 CLS : BEEP .5,15
205 PRINT AT 15,12; "now sorting"
210 LET S=1
215 LET S=S*2
220 IF S<=L THEN  GO TO 215
225 LET S=INT (S/2)
230 IF S=0 THEN  GO TO 500
235 FOR T=1 TO L-S
240 LET C=T
245 LET D=C+S
250 IF A$(C,1 TO 8)<=A$(D,1 TO 8) THEN  GO TO 280
255 LET B$=A$(C)
260 LET A$(C)=A$(D)
265 LET A$(D)=B$
270 LET C=C-S
275 IF C>0 THEN  GO TO 245
280 NEXT T
285 GO TO 225
300 CLS : BEEP .2,30: PRINT AT 10,5;"COPY?-(Y)(N)??"
301 IF INKEY$="Y" THEN  GO TO 304
302 IF INKEY$="N" THEN  GO TO 5000
303 GO TO 301
304 CLS : BEEP .4,20
305 LPRINT "PART NO./DESC.-----Bin-Qty-Cost"
306 FOR n=1 TO l
307 LPRINT n
310 LPRINT a$ (n)
330 NEXT n
335 LET TTL=0
340 FOR F=1 TO L
345 IF A$(F)="            " THEN  GO TO 370
350 LET TTL=TTL+(VAL A$(F,24 TO 26)*VAL A$(F,28 TO 31))
360 NEXT F
370 LPRINT : LPRINT : LPRINT TAB 17;"TTL-$";TTL
380 GO TO 5000
500 IF A$(1)="          " THEN  GO TO 520
510 BEEP .7,35: GO TO 5000
520 FOR F=1 TO 499
530 LET A$(F)=A$(F+1)
540 NEXT F
550 GO TO 500
700 CLS : PRINT AT 5,5;"DO YOU WISH TO?'
705 BEEP .1,10: BEEP .1,15: BEEP .1,20: BEEP .2,30
710 PRINT AT 9,8;"1-ADD TO LIST"
720 PRINT AT 11,8;"2-CHANGE AN ITEM"
730 PRINT AT 13,8;'3-RETURN TO MENU'
740 IF INKEY$="1" THEN  GO TO 22
750 IF INKEY$="2" THEN  GO TO 800
760 IF INKEY$="3" THEN  GO TO 5000
770 GO TO 740
800 CLS : BEEP .3,20: PRINT AT 10,3;"ENTER ITEM NO."
810 INPUT F
820 CLS : BEEP .3,25: PRINT AT 10,0;"INPUT ITEM NO. ';F
830 PRINT AT 15,0;A$(F)
840 PRINT AT 20,0;"PART NO.--DESC.-----Bin-Qty-Cost"
850 INPUT A$(F)
860 GO TO 700
2000 CLS : BEEP .3,30
2002 GO TO 3000
2005 CLS : BEEP .1,10: BEEP .2,20: PRINT "PART NO.-DESC.-----BI
N-QTY-CST"
2007 FOR p=1 TO 500
2010 PRINT p;  PRINT a$ (p)
2020 IF a$ (p)="       " THEN  GO TO 2040
2030 NEXT p
2040 PRINT 'end--list";p
2050 PRINT "press enter to go tomain menu"
2060 IF INKEY$="" THEN  GO TO 2060
2070 GO TO 5000
3000 PRINT AT 5,5;'TO REVIEW"
3005 BEEP .2,10: BEEP .2,15: BEEP .2,20
3010 PRINT AT 7,7;"1--ENTIRE LIST"
3020 PRINT AT 9,7;"2--BY ITEM"
3030 PRINT AT 11,7;"3--BY ITEM NO."
3035 PRINT AT 13,7;"4-RETURN TO MENU"
3040 PAUSE 75
3050 IF INKEY$="1" THEN  GO TO 2005
3060 IF INKEY$="2" THEN  GO TO 3300
3070 IF INKEY$="3" THEN  GO TO 3600
3075 IF INKEY$="4" THEN  GO TO 5000
3080 GO TO 3050
3300 CLS : BEEP .5,25
3310 PRINT AT 10,5;"ENTER ITEM BY FIRST 1-10"
3320 PRINT AT 13,7;"LETTERS OR NUMBERS AND"
3330 PRINT AT 16,7;"YOUR SELECTION + FIVE "
3340 PRINT AT 19,7;"WILL BE DISPLAYED."
3350 DIM H$(1,10): INPUT H$(1)
3352 BEEP 1,40
3355 PRINT AT 20,0;"                              "
3360 IF H$(1)="          ' THEN  PRINT AT 20,1;"REENTER YOUR SE
LECTION": GO TO 3350
3370 FOR H=1 TO 10
3373 IF H$(1,H)=' " THEN  GO TO 3380
3377 NEXT H
3380 FOR I=1 TO L
3390 IF A$(I,1 TO H-1)>=H$(1,1 TO H-1) THEN  GO TO 3440
3395 NEXT I
3400 CLS : BEEP .4,15: PRINT AT 10,0;"YOUR SELECTION NOT FOUND,
 TRY  ": PRINT "AGAIN?--(Y) OR (N)'
3410 IF INKEY$="Y" THEN  GO TO 3300
3420 IF INKEY$="N" THEN  GO TO 5000
3430 GO TO 3410
3440 CLS : BEEP .2,30
3445 IF I>494 THEN  GO TO 3455
3447 PRINT "PART NO.-DESC.-----BIN-QTY-CST"
3450 FOR J=0 TO 5: PRINT I+J: PRINT A$(I+J): NEXT J
3455 PRINT A$(I)
3460 PRINT : PRINT : PRINT "END OF REVIEW, TRY AGAIN (T) OR": P
RINT "RETURN TO MAIN MENU (M)"
3461 GO TO 3460
3470 IF INKEY$="T" THEN  GO TO 3300
3480 IF INKEY$="M" THEN  GO TO 5000
3490 GO TO 3470
3600 CLS : BEEP .6,20
3610 PRINT AT 5,5;"ENTER NO. AT WHICH": PRINT "     YOU WISH TO
 START.": PRINT "       (1 TO 490)    "
3615 PRINT AT 13,5;"YOUR SELECTION PLUS 5': PRINT '    MORE WIL
L BE ". PRINT "    DISPLAYED WITH": PRINT "  ITEM NUMBERS."
3620 INPUT W
3630 CLS : BEEP .8,25
3635 PRINT "PART NO.-DESC.-----BIN-QTY-CST"
3640 FOR K=W TO W+5: PRINT K: PRINT A$(K): NEXT K
3650 PRINT : PRINT : PRINT '       END OF REVIEW"
```

```
3660 PRINT : PRINT "          1--TPY AGAIN"
3670 PRINT : PRINT "          2--MAIN MENU"
3680 IF INKEY$="1" THEN  GO TO 3600
3690 IF INKEY$="2" THEN  GO TO 5000
3695 GO TO 3680
4000 PAPER 6: BORDER 5: INK 9: CLS
4005 BEEP .3,20:   BEEP .4,25: BEEP .5,30: BEEP .6,35
4080 PRINT "ENTER C to continue": INPUT P$
4090 IF P$="C" OR P$="c" THEN  GO TO 5000
4100 GO TO 4005
5000 CLS
5005 PAPER 6: BORDER 5
5010  PRINT AT 0,5;"MAKE YOUR SELECTION"
5015 BEEP .3,25: BEEP .4,15: BEEP .2,35
5020 PRINT AT 2,10;"1--Add or Change List"
5030 PRINT AT 4,10;"2--Review List"
5040 PRINT AT 6,10;"3--Copy List"
5050 PRINT AT 8,10;"4--Sort List"
5060 PRINT AT 10,10;"5--Save to cass."
5067 PRINT AT 12,10;"6--Make BIR Lists"
5068 PRINT AT 13,12;"(after 4 above)"
5069 PRINT AT 14,10;"7--CHG. QTY/PRICE"
5070 PRINT AT 15,12;"(after 4 above)"
5078 IF INKEY$ ="1"  THEN  GO TO 20
5080 IF INKEY$ ="2" THEN  GO TO 2000
5090 IF INKEY$ ="3"  THEN  GO T1 300
5095 IF INKEY$="4"  THEN  GO TO 700
6000 IF INKEY$ ="5" THEN  GO TO 9400
6005 IF INKEY$="6" THEN  GO TO 7500
6007 IF INKEY$="7" THEN  GO TO 9500
6050 GO TO 5078
7500 GO TO 7600
7502 CLS : BEEP .2,20: BEEP .2,3: PRINT AT 7,7;"PRINTING BINS"
7503 FOR F=1 TO 10
7504 LPRINT "BIN ";F
7505 LPRINT "PART NO./DESC.------Bin-Qty-Cost"
7510 FOR N=1 TO L
7520 FOR G=20 TO 22
7530 IF A$(N,G-1)="B" THEN  GO TO 8000
7540 NEXT G
7550 NEXT N
7560 LPRINT ""
7570 NEXT F
7580 GO TO 5000
7600 CLS : BEEP .2,20: BEEP .2,30: PRINT AT 2,6;"YOU WISH TO?"
7610 PRINT AT 5,9;"1-COPY ALL BINS"
7620 PRINT AT 7,9;"2-COPY A BIR"
7630 PRINT AT 9,9;"3-RETURN TO MENU"
7640 IF INKEY$="1" THEN  GO TO 7502
7650 IF INKEY$="2" THEN  GO TO 7700
7660 IF INKEY$="3" THEN  GO TO 5000
7670 GO TO 7640
7700 CLS : BEEP .2,20: BEEP .3,30: PRINT AT 15,5;"ENTER BIN NO.
 YOU WANT": PRINT : PRINT "          COPIED 1I TO 10)"
7710 INPUT F
7715 LPRINT "         BIN ";F: LPRINT : LPRINT "PART NO./DESC.-
---Bin-Qty-Cost"
7720 FOR N=1 TO L
7730 FOR G=20 TO 22
7740 IF A$(N,G-1)="B" THEN  GO TO 7800
7750 NEXT G
7760 NEXT N
7770 GO TO 5000
7800 IF F<10 THEN  GO TO 7020
7810 IF A$(N,G+1I)="0" THEN  GO TO 7900
7820 IF A$(N,G+1I)="0" THEN  GO TO 7760
7830 IF VAL A$(R,G)=F THEN  LPRINT A$(R)
7840 GO TO 7760
7900 LET Z=G+1
7910 IF VAL A$(N,Z)=F-10 THEN  LPRINT A$(N)
7920 LET Z=G-1
7930 GO TO 7760
8000 IF F<10 THEN  GO TO 8020
8010 IF A$(N,G+1I)="0" THEN  GO TO 8500
8020 IF A$(R,G+1I)="0" THEN  GO TO 7550
8030 IF VAL A$(N,G)=F THEN  LPRINT A$(N)
8040 GO TO 7550
8500 LET Z=G+1
8510 IF VAL A$(N,Z)=F-10 THEN  LPRINT A$(N)
8520 LET Z=G-1
8530 GO TO 7550
9500 CLS : BEEP .1,20: BEEP .2,15:
9510 PRINT AT 5,2;"DO YOU WISH TO?"
9515 PRINT AT 8,4;"CHANGE QTY."
9520 PRINT AT 10,7;"1--BY ITEM"
9525 PRINT AT 12,7;"2--BY ITEM NO."
9530 PRINT AT 15,4;"CHANGE PRICE"
9535 PRINT AT 17,7;"3--BY ITEM"
9537 PRINT AT 19,7;"4--BY ITEM NO."
9539 PRINT AT 21,4;"M--RETURN MAIR MENU"
9540 IF INKEY$="1" THEN  GO TO 9700
9545 IF INKEY$="2" THEN  GO TO 9570
9550 IF INKEY$="3" THEN  GO TO 9800
9555 IF INKEY$="4" THEN  GO TO 9600
9557 IF INKEY$="M" THEN  GO TO 5000
9560 GO TO 9540
9570 CLS : BEEP .2,20: BEEP .1,25: PRINT AT 12,0;"ENTER ITEM NO
. TO CHANGE QTY. OF"
9575 INPUT ITEM
9580 PRINT AT 15,2;"ENTER NEW QTY."
9585 INPUT Q$
9590 LET A$(ITEM,24 TO 26)=Q$
9595 PRINT "YOU HAVE CHGD. THE QTY. OF ITEM ";ITEM;" TO ";Q$: P
RINT A$(ITEM)
9596 PRINT : PRINT "TO RETRY, PRESS (R) OR TO RETURN": PRINT "T
O CHANGE MENU PRESS (C)"
9597 IF INKEY$="R" THEN  GO TO 9570
9598 IF INKEY$="C" THEN  GO TO 9500
9599 GO TO 9597
9600 CLS : BEEP .2,20: BEEP .3,10
9605 PRINT AT 7,0;"ENTER NO. OF ITEM TO CHG. PRICE"
9610 INPUT ITEM
9620 PRINT AT 10,2;"ENTER NEW PRICE FOR ITEM ";ITEM
9630 INPUT Q$
9640 LET A$(ITEM,20 TO 31)=Q$
9650 PRINT "NEW PRICE  OF ITEM ";ITEM;" IS $";Q$
9660 PRINT : PRINT A$(ITEM)
9670 PRINT : PRINT "TO RETRY PRESS(R) OR TO RETURN": PRINT "TO
CHANGE MENU PRESS (C)"
9680 IF INKEY$="R" THEN  GO TO 9600
9690 IF INKEY$="C" THEN  GO TO 9500
9695 GO TO 9680
9700 CLS : BEEP .1,20: BEEP .2,15: BEEP .3,20
9710 PRINT AT 10,2;"ENTER ALL LETTERS AND OR NOS.": PRINT : PRI
NT "OF ITEM YOU RISH TO CHANGE."
9720 INPUT I$
9725 LET I=LEN I$
9730 FOR J=1 TO L
9735 IF A$(J,1 TO I)=I$ THEN  GO TO 9750
9740 NEXT J
9742 CLS : PRINT AT 19,0;"ITEM NOT FOUND, PRESS (T) TO TRY": PR
INT "AGAIN OR (C) TO RETURN TO ": PRINT "CHANGE MENU"
9745 IF INKEY$="T" THEN  GO TO 9720
9747 IF INKEY$="C" THEN  GO TO 9500
9749 GO TO 9745
9750 CLS : PRINT AT 5,4;"ENTER NEW OTY. FOR ITEM NO. ": PRINT J
: PRINT A$(J)
9760 INPUT Q$
9770 LET A$(J,24 TO 26)=Q$
9775 PRINT "YOU HAVE CHANGED ITEM NO. ";J;"   TO-------": PRINT
 A$(J)
9780 PRINT : PRINT "ENTER (R) IF IRCORRECT OR (C) TO": PRINT "R
ETURN TO CHANGE MENU"
9785 IF INKEY$="R" THEN  GO TO 9700
9787 IF INKEY$="C" THEN  GO TO 9500
9789 GO TO 9785
9800 CLS : BEEP .2,20: BEEP .3,30: PRINT AT 10,2;"ENTER ALL LET
TERS AND OR NOS.": PRINT ""OF ITEM YOU WISH TO CHANGE."
9810 INPUT I$
9815 LET I=LEN I$
9820 FOR J=1 TO L
9830 IF A$(J,1 TO I)=I$ THEN  GO TO 9950
9835 NEXT J
9840 CLS : PRINT AT 19,0;"ITEM NOT FOUND, PRESS (T) TO TRY": PR
INT "AGAIR OR (C) TO RETURN TO ": PRINT "CHANGE MENU"
9842 IF INKEY$="T" THEN  GO TO 9800
9845 IF INKEY$="C" THEN  GO TO 9500
```

```
9847>GO TO 9842
9850 CLS : PRINT AT 5,4;"ENTER NEW PRICE FOR ITEM NO. "; PRINT
J: PRINT A$(J)
9860 INPUT Q$
9870 LET A$(J,28 TO 31)=Q$
9875 PRINT "YOU HAVE CHANGED ITEM NO.";J;"TO---": PRINT A$(J)
9880 PRINT ''ENTER (R) IF INCORRECT OR (C) TO": PRINT "RETURN
TO CHANGE MENU"
9885 IF INKEY$="R" THEN  GO TO 9800
9887 IF INKEY$="C" THEN  GO TO 9500
9889 GO TO 9885
9900 CLS : BEEP .2,30: BEEP .1,20: PRINT AT 10,5;"SAVE?(Y)(N)"
9905 PAUSE 0
9910 IF INKEY$="Y" OR INKEY$="y" THEN  GO TO 9950
9920 GO TO 5000
9930 GO TO 9510
9950 CLS : BEEP .2,10: BEEP .1,20: PRINT AT 10,13;"SAVING"
9960 RANDOMIZE USR 100: SAVE "PARTS.BJ" LINE 10
9970 GO TO 5000
9980 REM LLIST Printer Driver "NOT PART OF THE ABOVE PROGRAM"
9981 RANDOMIZE USR 100: OPEN #3,"LP"
9982 RANDOMIZE USR 100: POKE 16098,62: RANDOMIZE USR 100: POKE
16092,0: REM Column/LF 62 For right column
9983 PAUSE 10: RANDOMIZE USR 100: POKE 16094,1: LPRINT : REM  M
ARGIN 70 For right column
9984 OUT 127,30: OUT 127,27: OUT 127,20
9985 OUT 127,27: OUT 127,56
9986 LLIST 9847
```

Did You Try This?

by David Lassov

Our first program, that we want everyone to know about, is **Headline** from the book "The Essential Guide To Timex/Sinclair Home Computers" by Peter Morse Ian Adamson, Ben Anrep and Brian Hancock. It was published 1983 by Simon & Schuster which examines the 1000 thoroughly and the Sinclair/2000 enough

```
   1 REM *HEADLINER*
  10 CLS : PRINT TAB 8;"HEADLINE
S",TAB 8;"---------"
  20 PRINT ,,;"PROGRAM TO PRODUC
E LARGE PRINT",,"AS HEADLINES ALO
NG PRINTER PAPER"
  30 PRINT ,,;"INPUT ANY LENGTH
STRING"
  50 REM DIM ARRAY TO STORE LETT
ER
  60 DIM A(64)
  70 INPUT , LINE U$
  90 FOR F=1 TO LEN U$
 100 REM TAKE LETTER
 110 LET L$=U$(F)
 140 REM GET ROM CODES.
 150 FOR C=0 TO 7
 160 LET L=PEEK (15360+C+8*CODE
L$)
 170 REM GET BINARY INTO ARRAY
 180 FOR B=1 TO 8
 190 IF L-2*INT (L/2)=1 THEN GO
TO 220
 200 LET A(8*C+B)=0
 210 GO TO 230
 220 LET A(8*C+B)=1
 230 LET L=INT (L/2)
 240 NEXT B
 250 NEXT C
 260 GO SUB 500
 270 NEXT F
 280 STOP
 500 REM PRINT SUBROUTINE
 510 REM REVERSE LOOPS
 520 FOR X=8 TO 1 STEP -1
 530 LET A$=""
 540 FOR Y=7 TO 0 STEP -1
 570 REM PUT ONE ROW OF CHR INTO
A$.
 580 IF A(Y*8+X)=1 THEN LET A$=A
$+██
 590 IF A(Y*8+X)=0 THEN LET A$=A
$+
 600 NEXT Y
 610 LPRINT A$
 620 LPRINT A$
 630 NEXT X
 640 RETURN
```

Insert your choice of characters here

Please refer to the accompanying listing in order to see how **Headline** takes an arbitrary string of alphanumeric characters one by one and prints the ROM's bit images, by expanding each ink pixel into a rectangle, approximately 1/6' square. As shown, the string is INPUT at line 70 Each letter is taken at line 110, and the ROM codes are PEEKed at line 160. The program double Prints the image of a character s row of eight pixels at lines 610 and 620.

The random number investigator program comes from "200 Computer Programs In Basic For The T/S-1000 Z/X-81 T/S-2068" by Joe C. Smith, Jr. There, it is called "Random Sound" and has some accompanying screen display But, for this author a Sound Freak, the screen print only interferes with an otherwise fascinating demonstration. As for yourself play around with different values for the

```
10 RANDOMIZE : LET y=0
30 LET R=RND
40 IF R<=0.5 THEN LET y=y-1
50 IF R>0.5 THEN LET y=y+1
60 BEEP 0.1,y
70 GO TO 30
```

probabilities, limiting the value of R at lines 40 and 50. Just remember that the two values have to add up to 1 We found the program to be very insensitive to changing these values

For example sometimes values 0 4 and 0 6 yield the same behavior from RUNning the program, as do the ideal values of 0 5 and 0.5 Of course extreme values like 0 1 and 0 9 bias the program so much as to cause the Sound Variable Y to run out of bounds at line 60. That is interesting to us

To the attention of those who did not respond:-

Ruth Fegley
William J. Harmer
Fred J. Henn
Paul E. Holmgren
Gary L. Lessenberry
John J. Shepard III
Tim Ward

OTTAWA-HULL T/S U G
William J. Harmer

CAPITOL AREA TIMEX SINCLAIR U G
Takoma Park, MD

SINCLAIR MILWAUKEE U G
Neal Schultz

Greetings

Our records show that you joined SNUG several years ago. Only two issues of the Newsletter were ever mailed. As the remaining person involved with this effort, I am now prepared to close the books on this endeavor. For various reasons it proved to be a bigger job than most of those involved with its inception were able to handle

The Treasury less expenses for the two issues of the Newsletter and less the mailing of this offer are to be returned to the membership.

By agreement with ☐UPDATE! magazine, ☐IQLR newsletter and ☐T/SNUG you may choose to have your remaining SNUG subscription extended in these fine publications, ☐to donate to T/SNUG, or ☐to receive a prorated refund check.

Please notify one of the addresses below — within 60 days — of your decision by checking a box ☑ so that we can close the books on this belated matter.

Paul Holmgren

A KAHALE
335 W NEWPORT RD
HOFFMAN ESTATES IL 60195-3106

D LAMBERT
1301 KIBLINGER PL
AUBURN IN 46706-3010

If you were a member of SNUG, please respond to the above.

Postcards of the above were mailed to all those who were listed in the SNUG Membership List that I received To date, 49 replies were received out of the 77 postcards that were mailed. Their choices were:

UPDATE!	5
IQLR	3
T/SNUG	14
Donate to T/SNUG	9
Refund	13
Return to sender	5

Abed